

West Nile Virus

Information for Horse Owners

March 2003

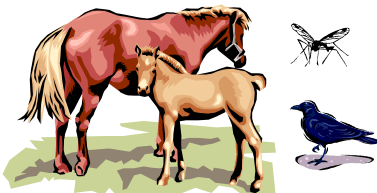
Update 2

No 5

Fact Sheet

DESCRIPTION

West Nile Virus (WNV) is an arbovirus (arthropod borne virus) spread by mosquitoes and primarily affects birds, humans and horses. Birds are the reservoir for WNV. Clinical signs of infection are highly variable and range from mild and flu-like to severe, including encephalitis and death.



HISTORY

The virus was first identified in the West Nile District of Uganda in 1937, but did not appear in the United States until the outbreak of 1999 in the Northeast. The virus has progressively moved westward affecting most states. The disease has not been observed in California, but based on the migratory patterns of birds, there is good reason to predict that it will appear soon.

CLINICAL DISEASE OBSERVATIONS

Not every horse exposed to WNV will develop clinical signs of disease. Of those that do, clinical signs include ataxia (stumbling, staggering, wobbly gait, or incoordination), circling, hind limb weakness, inability to stand, muscle fasciculation, paralysis or acute death. Only 1 out of 4 affected horses develops a fever. Between 20 - 40% of the horses that develop clinical signs of disease either die or are euthanized.

TESTING PROTOCOL

WNV in horses can be definitively diagnosed by testing blood, cerebral spinal fluid, or certain tissues. The California Animal Health and Food Safety laboratory provides **free** testing of suspected WNV cases in horses and ratites (ostriches, rheas, emus). Contact your veterinarian for more information. Please visit CDFA's WNV web site for more detailed information at :

http://www.cdfa.ca.gov/ahfss/ah/wnv_info.htm

SURVEILLANCE

The California Department of Health Services and the California Department of Food and Agriculture collaboratively conduct mosquito, sentinel chicken, dead bird, human, and equine surveillance programs for WNV and other related arboviruses. To report dead birds for possible WNV testing, call (877) WNV BIRD.



MOSQUITO CONTROL



Reducing or eliminating your horses' exposure to mosquitoes is crucial to protecting them from WNV. Effective ways to achieve this include eliminating mosquito-breeding sites and reducing exposure to adult mosquitoes.

- 1) Eliminate mosquito-breeding sites by:
 - Cleaning waterers, bird baths, plant saucers, etc. at least weekly
 - Ridding unnecessary standing water (wheelbarrows, tires, etc.)

Animal Health and Food Safety Services



For additional information contact the Animal Health Branch at:

Phone: (916) 654-1447 Fax: (916) 653-2215

Or visit our web site at <http://www.cdfa.ca.gov>

Redding District:	(530) 225-2140
Modesto District:	(209) 491-9350
Tulare District:	(559) 685-3500
Ontario District:	(909) 947-4462
USDA-VS Area Office	(916) 857-6170 (877) 741-3690

West Nile Virus Fact Sheet (Con't)

- Scheduling pasture irrigation to minimize standing water
- Keeping swimming pools clean and free from water on covers
- Keeping ponds aerated and/or stocked with fish
- Considering stocking water tanks with fish that consume mosquito larvae. (Local mosquito control may provide assistance)

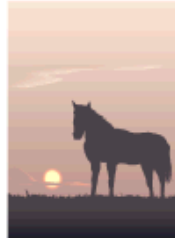
2) Reduce exposure to adult mosquitoes by:

- Stabling horses during active mosquito feeding times (dusk / dawn)
- Utilizing screens when mosquitoes are eliminated prior to stabling
- Utilizing fans, barrier cloth, flysheets, repellents (permethrin), and insecticide misting systems as adjunctive methods of control

VACCINATION

The USDA has licensed Fort Dodge Laboratories to market a WNV vaccine for horses in the United States. This vaccine has been approved for sale in California. The product is described by the manufacturer as a “killed, whole cell vaccine paired with Metastim adjuvant and labeled for use in healthy horses as an aid in the prevention of disease caused by WNV.”

The manufacturer's recommendations call for administering a second dose 3-6 weeks after the initial dose, followed by a yearly booster. Preliminary antibody testing on vaccinated horses suggests that it may take several weeks after the second dose has been administered for a measurable antibody response to appear. A number of horses in the Southeast, where WNV is now considered to be endemic, have become ill with the disease, despite having received an initial dose of the vaccine, suggesting that one dose may not be protective. Because complete information on the effectiveness of the vaccine is not



yet available, it is important to stress that WNV prevention should be mosquito control programs.

When owners are considering vaccinating for WNV, it is important to be aware that there may be future restrictions on interstate and international shipments of horses with titers to this disease. For horses engaged in international competition, this may be an important factor for consideration. Because it is important to distinguish between vaccinated and infected horses, it is important that accurate vaccination records be kept.

Should an owner decide to vaccinate, the vaccination should be timed to promote peak antibody titers to correspond with seasonal mosquito activity.

MONITORING YOUR HORSES

Owners are urged to notify their veterinarian if their horse shows neurologic signs, and veterinarians are asked to follow specific diagnostic procedures on clinically suspect horses. These procedures are detailed in the spring CDFA/DHS encephalitis newsletter. These guidelines may also be obtained from the practitioner's Animal Health Branch District Office.

FREQUENTLY ASKED QUESTIONS

Question: Can my horse catch West Nile Virus from another infected horse?

Answer: No

Question: Can I catch West Nile Virus from an infected horse?

Answer: No

Question: What can I do to help protect my horse from contracting WNV?

Answer: 1) mosquito control, and 2) vaccination options





West Nile Virus

California Department of Food and Agriculture
Animal Health Branch

West Nile Virus (WNV) is a virus spread by mosquitoes that primarily affects birds, humans and horses. Clinical signs of infection vary from mild and flu-like to severe, including encephalitis (potentially fatal brain inflammation) and death. WNV was first detected in the U.S. in 1999 and has progressively moved westward affecting most states. WNV was confirmed in Imperial County, California in late August 2003.

While horses are susceptible to WNV, many horses infected with WNV will not develop any illness and recover. One of every four develops a fever. Of those that do become ill, approximately 30 percent die or must be destroyed. In 2002, WNV caused 14,717 cases of equine illness in 40 states. ***If your horse becomes infected, it cannot spread the disease to you or to other horses.***

Clinical Signs

Stumbling • wobbly gait • loss of coordination • staggering • inability to stand •
• circling • hind limb weakness • muscle twitching • convulsions • paralysis • death

Protect Your Horse

Eliminate mosquito-breeding sites

- Drain unnecessary standing water (wheelbarrows, tires, etc.)
- Clean water containers: bird baths, plant saucers, etc. at least weekly
- Schedule pasture irrigation to minimize standing water
- Keep swimming pools optimally chlorinated and drain water from covers
- Stock water tanks with fish that consume mosquito larvae (local mosquito control may provide assistance) or use mosquito “dunk” available at hardware stores
- Stable horses during active mosquito feeding times (dusk/dawn)
- Use screens when mosquitoes are eliminated prior to stabling

Vaccination A USDA approved vaccine is available for horses. Consult a veterinarian for advice. The timing of the vaccination is critical because it must be administered prior to disease exposure. Two doses are required, administered three weeks apart. Protection usually doesn't develop until four to six weeks after the second dose. Thereafter, a booster is recommended twice a year.

Cure There is no known cure for WNV.

Is treatment available? Treatment consists of standard practice given to animals infected with a virus, including supportive therapy to maintain the strength and condition of the horse.

California's Preparation

The California Department of Food and Agriculture (CDFA) has provided free WNV testing, disseminated information about WNV to horse owners and veterinarians, and maintains a series of informational items at www.cdfa.ca.gov.

Mosquito Testing

Mosquitoes throughout California are sampled for the presence of WNV, western equine encephalitis, eastern equine encephalitis and St. Louis encephalitis viruses—all mosquito-borne encephalitis which affects the equine population.

Sentinel Chicken Testing

Several hundred chicken flocks are strategically placed throughout the state and are tested routinely during the mosquito season to detect evidence of infection from the various viruses.

If you find a dead bird You can help by reporting any crows, ravens, magpies, jays, sparrows and finches that have been dead for less than 48 hours by calling 877-WNV-BIRD. Note the bird's location, type and condition. The bird should show no signs of decomposition or maggot infestation.

On-line resources:

CDFA: www.cdfa.ca.gov DHS: www.westnile.ca.gov
CDC: www.cdc.gov/ncidod/dvbid/westnile/qa/wnv_horses.htm
USDA: <http://www.aphis.usda.gov/lpa/issues/wnv/wnv.html>
UCD Center for Equine Health: www.vetmed.ucdavis.edu/ceh/

CDFA Animal Health Branch Offices

- Headquarters 916.654.1447 • Redding 530.225.2140
- Modesto 209.491.9350 • Tulare 559.685.3500 • Ontario 909.947.4462

California Department of Food and Agriculture

Animal Health and Food Safety Services
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